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The coming wireless spectrum apocalypse and how it hits you
Small carriers are worried about getting snuffed by the deep pockets of AT&T and Verizon Wireless, and they want help. What judges and regulators decide to do could impact your wallet for years to come.

by Marguerite Reardon   August 13, 2012 12:01 AM PDT
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(Credit: James Martin/CNET)
C Spire Wireless, a small, southern wireless provider formerly known as Cellular South, has an ambitious plan to build a fast, 4G LTE network to reach its 900,000 customers. To do it, C Spire bought $192 million worth of 700 MHz wireless spectrum, which is considered some of the most valuable wireless spectrum that's still available because it can travel long distances and penetrate obstacles.
But there's a problem. C Spire claims it hasn't been able to use this spectrum and hasn't been able to deploy its 4G network. It says the bigger carriers, especially AT&T, have used their market power to ensure chip designers and device makers make equipment compatible with their flavor of the technology, leaving smaller carriers in the cold. And without devices and network gear, C Spire says it's been sitting on a costly resource it can't use -- and thus can't deliver to you, the consumer.
"We will deploy our 4G LTE network," said Eric Graham, C Spire Wireless' senior vice president for strategic relations. "But the fact that AT&T is using a different band plan [that is, a set of technical standards for equipment] in the 700 MHz spectrum has slowed things down. At least initially we'll be using other spectrum other than the 700 MHz spectrum we bought for 4G. But eventually, we are going to need that spectrum to add more capacity to our network."
In the wireless industry, it seems, you can never have too much spectrum. Even AT&T and Verizon Wireless, which together control about 70 percent of the wireless market, say they need more of it. But even if you have enough spectrum, as C Spire argues, the big guys can use their leverage with suppliers to make it darn difficult for you to use it.
"As we transition to 4G LTE, spectrum is a key part of the strategy and survival of every carrier. And it's the duty of the regulators to ensure that we don't end up with a market of spectrum haves and have-nots."
--Kathleen Ham, VP of federal regulatory affairs, T-Mobile
Can you imagine what would happen if the industry giants further solidified their hold on the market by hoarding even more spectrum? Bad things, those underdogs would assure you, starting with higher costs for consumers and fewer innovations. And that, they say, is why regulators and judges need to intercede.
"We are at a critical time in the evolution of the wireless industry," said Kathleen Ham, vice president

of federal regulatory affairs for T-Mobile, in an interview with CNET. "And as we transition to 4G LTE, spectrum is a key part of the strategy and survival of every carrier. And it's the duty of the regulators to ensure that we don't end up with a market of spectrum haves and have-nots."

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But how many competitors are needed in a market? Are two enough, or perhaps three? It's this question that the Federal Communications Commission is trying to answer as it looks at some of the biggest in front of it today. T-Mobile, whose proposed $39 billion deal to merge with AT&T last year was rejected by the the Federal Communications Commission and the Department of Justice, says the FCC has already spoken to this point. And if it wants to preserve more competition, it had better establish policies that back that up.

"If the government turned down our deal [to merge with AT&T] because it wants us to continue to compete in the market," T-Mobile's Ham said, "then we need access to spectrum."

This fight over spectrum is the battle through which nearly every major move by the wireless carriers must be viewed. It's the reason that AT&T was willing to pay $39 billion to buy T-Mobile last year. It's also what's driving AT&T and Verizon Wireless to change their pricing models, eliminating unlimited data and creating share plans for data usage. It's why the failure of Philip Falcone's LightSquared is devastating not just to investors but to smaller wireless providers.

It's why the largest wireless operators are spending millions of dollars each year in lobbying to make sure rules for new spectrum auctions are written in a way that favors their interests, and it's why there has been so much wheeling and dealing around Verizon's move to buy wireless spectrum from a consortium of cable operators.

The companies that come out ahead with valuable spectrum today will be able to dictate what happens in the market as carriers move to 4G LTE services that will provide broadband-like data speeds to wireless consumers. And that scares the daylights out of smaller competitors.

Big carriers with muscle

Getting your hands on spectrum doesn't mean you're on easy street. Even carriers that have spectrum they want to use can still be muscled out of the market when AT&T and Verizon throw their weight around.

Because those two companies collectively control the majority of wireless subscribers in the country, smaller carriers say AT&T and Verizon are able to manipulate standards groups and control suppliers to the point where smaller providers are unable to get access to handsets and other network gear that's commercially available at high volumes to AT&T and Verizon.

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C Spire says it's been a victim of these tactics. In April, it filed an antitrust lawsuit against AT&T and its suppliers for trying to run it out of business. In the lawsuit, C Spire alleges that AT&T collaborated with chip makers and standards bodies to create specifications for devices that run only on its sliver of 700 MHz spectrum.

This is a problem for smaller carriers like C Spire, because they need to use the same specifications for their handsets and networking equipment that a bigger player such as AT&T uses in order to get products to sell to their customers. Without the scale of a company like AT&T, these smaller players simply can't get manufacturers to build devices at a low enough cost and in a timely enough manner to compete against AT&T.

"AT&T has been abusing its position as a dominant buyer of the Lower 700 MHz wireless devices," C Spire's Graham said in a telephone interview.

For its part, AT&T says it created this "spectrum island" for technical reasons. AT&T argues that there are interference issues with the slice of 700 MHz spectrum that smaller carriers like C Spire own, and so to protect its wireless customers, AT&T developed its own "band class."

An AT&T representative declined to comment on the litigation. But the company has said publicly that C Spire couldn't prove that it didn't have legitimate technical reasons for developing its own standard for its wireless spectrum.

Consequences of a concentrated market

C Spire is only one of dozens of smaller providers throughout the U.S. trying to compete with the nation's two largest wireless providers. And the courts and the FCC are being asked to intervene and ensure competition where, not to put too fine a point on it, a relatively unfettered market has been unable to do so. And, as we said before, imagine the pickle C Spire would be in if the bigger companies were able to hoard even more spectrum?

It's a similar situation to when a large company or university, which already owns big chunks of real estate in prime neighborhoods decides to buy even more property. The fear is that the big owner will force out the mom-and-pop shoe store and replace it with a Foot Locker. The same fear exists with wireless spectrum. Smaller carriers will not only be prevented from buying spectrum, they may also be forced out of business by bigger players that control the standards used in handsets and network equipment. And they may refuse to strike roaming agreements that would allow smaller carriers to offer a wider footprint of access on their networks.

This regulatory dilemma is coming to a head just as the FCC reviews the biggest transfer of wireless spectrum outside of a merger in the agency's history.

Last year, Verizon announced a $4 billion bid to buy 20 MHz of valuable Advanced Wireless Service (AWS) spectrum from a consortium of cable companies called SpectrumCo. Verizon, which already owns about 20 MHz of AWS spectrum, says it wants to use the additional cable spectrum as backup spectrum for its 4G LTE network.

Verizon has already begun building its LTE network using a nationwide license of 700 MHz wireless spectrum. And it intends to use its AWS spectrum as well as the cable operators' AWS spectrum to add capacity to that network as it grows, especially in dense urban areas.

But competing carriers say that Verizon already has enough AWS spectrum in many markets. Competitors such as T-Mobile and MetroPCS initially accused Verizon of "warehousing" spectrum. They say other carriers could put that same spectrum to use much more quickly than Verizon intends to use it.

"Verizon's plan to acquire spectrum from the cable companies will allow Verizon to further dominate and control the nation's airwaves."

--U.S. Sen. Al Franken (D-Minn.)

In July, T-Mobile struck a spectrum-swapping deal with Verizon. If Verizon's deal with cable operators is approved by regulators, T-Mobile will buy some of Verizon's AWS spectrum holdings in certain markets. As a result, T-Mobile has now withdrawn its opposition to the cable deal.

Others who have been critical of this deal say the FCC and Justice Department, which is also reviewing the deal, still need to impose some conditions on the merger to protect consumers. In a letter to the DOJ and the FCC, U.S. Sen. Al Franken (D-Minn.) in late July pressed the government to adopt conditions that would ensure the partnership between Verizon and cable providers does not harm consumers .

"Verizon's plan to acquire spectrum from the cable companies will allow Verizon to further dominate and control the nation's airwaves," Franken wrote in a letter to FCC Chairman Julius Genachowski and U.S. Attorney General Eric Holder. "I am concerned that this transaction poses a serious threat to consumers and to competition that will ultimately result in higher prices and less choice for consumers. If your agencies do approve this deal, I urge you to only do so if you are able to adopt stringent conditions to protect competition and the public interest."

The FCC's big opportunity

Other stakeholders, such as the Rural Carrier Association, a Washington DC-based lobbying group, expect regulators to approve the deal. And like Franken, they are pushing for conditions. In fact, Steve Berry, the head of RCA, thinks that the FCC can use the Verizon-cable deal as a springboard to impose conditions that will prevent Verizon from gaining too much control over spectrum in any given market. And he thinks carefully crafted conditions could also prevent interoperability issues such as the one that C Spire faces with AT&T.

"The FCC has a unique opportunity with this deal to make a win-win-win for Verizon, the cable operators and the rest of the industry," Berry said. "This is the largest spectrum deal that the FCC has ever considered, and it makes sense for the FCC to set some competitive policy parameters."

Speaking at an industry event in June, AT&T CEO Randall Stephenson urged regulators to speed up spectrum license transfers. "By 2013 demand [for wireless data services in the U.S.] will outstrip supply. ... This isn't a problem that is six to eight years from now. It's happening now."

(Credit: CNET/Marguerite Reardon)

Verizon has already signaled it's willing to make concessions to get the deal completed. In April, the company said it would sell 700 MHz spectrum in the lower A and B blocks if the deal with the cable operators wins approval from regulators. And at the end of June, it said it had struck a deal with T-

Mobile USA to sell big chunks of AWS spectrum it already owns to T-Mobile, if the deal with SpectrumCo is completed.

RCA's Berry said that this deal with T-Mobile must be examined more closely to make sure that Verizon is still not "warehousing" spectrum in markets where it could be used immediately by other carriers.

"It's not a cure-all," he said. "But clearly it gets some of the spectrum in the hands of competitive carriers. Even so, the FCC needs to look very closely at this."

Why this is important

There's no question competition keeps prices in check and spurs innovation. But how many competitors are needed in a market? Many believe that a scenario with two players in a market, a so-called duopoly, is just one competitor shy of a monopoly. And policy makers at the FCC have done what they can to avoid such a scenario.

Some consumer advocates say the concentrated power of AT&T and Verizon have in the market has already resulted in higher prices for data services. Two years ago, AT&T eliminated its $30 unlimited data plan, replacing it with a tiered offering. Verizon Wireless followed a year later with its own tiered offering. Now both AT&T and Verizon Wireless have introduced new "share plans," which allow people on the same family plan to share buckets of data or allows individuals to use their data across multiple devices.

The plans are meant to encourage users to bring additional devices, like tablets to the network, but they will also increase pricing on data services. As part of these new plans, Verizon has cut in half the amount of data it's offering to consumers at roughly the same price. Verizon now charges $50 for a 1GB data plan that also includes unlimited voice minutes and text messages. Its previous plan offered 2GB of data for $30 a month, and voice minutes and text messaging were sold separately. AT&T offers similarly priced plans

? See also: Help! These data share plans are too confusing (FAQ)

Even though AT&T and Verizon are bundling in unlimited voice and text messaging with the new share packages, consumers are still paying more and receiving less data than they were allotted under the previous plans.

"The cheapest option Verizon now offers smartphone customers is $90 for half as much data as $80 buys you today," Michael Weinberg, an analyst at Public Knowledge, wrote in a blog post last month. "And in less than 12 months, $30 has gone from buying you unlimited data to not even covering 1 GB...There does not appear to be very much competitive pressure keeping carriers from raising prices for customers -- which is part of the reason that we are against even more consolidation in the market."

Meanwhile, competitors such as Sprint and T-Mobile, along with regional carriers like Leap Wireless and MetroPCS, have not introduced share plans. And they are keeping unlimited data plans, although some like T-Mobile slow down service after a certain threshold is reached. Sprint is the only major carrier that offers unlimited data with no limitations for smartphone customers.

T-Mobile has publicly criticized Verizon's new pricing plan, stating that it doesn't offer consumer enough choice and penalizes customers who exceed their limits.
"What wireless customers really want is worry-free plans," said Harry Thomas, director of segment marketing for T-Mobile. "They don't want to have to do a lot of calculations to figure out if someone is going to go over their monthly data limit due to excessive usage."
But there's an increasingly contrarian viewpoint that says, wait a minute, the government should not be in the business of intervening for market laggards. Yes, we couldn't finish this piece without giving an enthusiastic proponent of free and unfettered markets his two cents.
Eli Dourado, a research fellow at the Mercatus Center at George Mason University, argues that "duopoly can be consistent with vigorous competition." He uses the digital camera market as an example. Nikon and Canon are the only two major players selling DSLRs on the market. And "despite the dominance of these two firms, the price of DSLRs falls every year, and quality continuously goes up."
Now a little background: The Mercatus Center is one of the most influential conservative think-tanks. It gets significant financial backing from the conservative libertarian-leaning Koch Family Foundations. And democratic strategist Rob Stein described the Mercatus Center as "ground zero for deregulation policy in Washington."
He argues in a recent blog post that it may simply be unreasonable to expect several competitors to remain in the wireless market, because the fixed costs for operating these businesses is so high. It takes billions of dollars to buy wireless spectrum and build and maintain communications infrastructure. The same is true for other industries, such as commercial jet aircraft manufacturers. Today there are effectively only two competitors: Boeing and Airbus.
"Would we really want there to be more commercial jet producers? There would be a whole lot of duplication of costs, and the price of jetliners and air travel would increase, not decrease. We're better off with a duopoly, and in fact we get duopoly precisely because vigorous competition between the jumbo jet giants keeps everyone else out."
It's a fair point. But there is no guarantee that companies that find big savings by consolidating will pass those savings onto consumers. In fact, when there are only one or two players in the market, there is little incentive to drop prices when the business gets more efficient.
"As a result, when thinking about carrier consolidation, you are essentially faced with two choices," said Public Knowledge's Weinberg. "One is to allow rapid consolidation in the hope of gaining efficiencies of scale, but at the same time recognize that the mo/duopoly you create will eventually have to be regulated as such or broken up. The other is to engage in a lighter level of regulation today that ensures that there is competition in the wireless market, and that said competitive market is capable of largely regulating itself."
"The option that does not exist is to allow the formation of a monopoly or a duopoly," he added, "and assume it will then act in the best interest of everyone else."
Topics:Corporate and legal Tags:wireless, spectrum, FCC, mobile Marguerite Reardon
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